



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/523,289	09/06/2005	Robert Edgar Whelan	PIZ1.PAU.01	3573

7590 10/08/2008  
Daniel L Dawes  
Myers Dawes Andras & Sherman  
Suite 1150  
19900 MacArthur Boulevard  
Irvine, CA 92612

EXAMINER
----------

DUONG, DIEU HIEN

ART UNIT	PAPER NUMBER
----------	--------------

2821

MAIL DATE	DELIVERY MODE
-----------	---------------

10/08/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/523,289	<b>Applicant(s)</b> WHELAN, ROBERT EDGAR	
	<b>Examiner</b> DIEU HIEN T. DUONG	<b>Art Unit</b> 2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 08/15/2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 12-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 February 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>08/22/2005</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Election/Restrictions***

1. Applicant's election with traverse of Group I, claims 1-11 in the reply filed on 08/15/2008 is acknowledged. The traversal is on the ground(s) that a search of all groups would not be unduly burdensome. This is not found persuasive because the inventions are independent or distinct and they have acquired a separate status in the art due to their recognized divergent subject matter. In view of this reason, a restriction imposed is clearly proper and it is made FINAL.

### ***Priority***

2. Acknowledgement is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d).

### ***Information Disclosure Statement***

3. The information disclosure statement(s) (IDS) submitted on 08/22/2005 in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is considered by the examiner.

If applicant is aware of any prior art or any other co-pending application not already of record, he/she is reminded of his/her duty under 37 CFR 1.97 to disclose the same.

### ***Specification***

4. The disclosure is objected to because of the following informalities:

In page 1 of specification, after the title, the paragraph - -This application is a 371 of PCT/AU03/00964 07/30/2003- - should be inserted.

Appropriate correction is required.

### ***Abstract***

5. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

6. The abstract of the disclosure is objected to because the abstract has more than one single paragraph and drawing. Correction is required. See MPEP § 608.01(b).

### ***Drawings***

7. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "inner arcuate structural member" and "the outer arcuate structural member" (in claim 5) must be shown or the features canceled from the claims. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure

Art Unit: 2821

is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

8. Claims 1-11 are objected to because of the following informalities:

Claim 1, line 3, "box -- section" should be changed to - -box section- -;

Claims 2-11, line 1, "A" should be changed to - -The- -;

Claim 3:

Line 2, "member" should be changed to - -members- -;

Line 3, "box - - section" should be changed to - -box – section- -;

Claim 7, line 4, "sheet" should be changed to - -sheeting- -;

Claim 8, line 4, "box - - section" should be changed to - -box – section- -;

Claim 11, line 2, "a; foundation" should be changed to - -a foundation- -;

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

Art Unit: 2821

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 1-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, lines 3-6, the recitation "the arcuate structural members being of box -section configuration and abutting along their inner and outer arcuate surfaces such that load can be transferred from outer arcuate structural member to an inner arcuate structural member" is unclear. It is not clear for the reasons set forth below:

a) It is not clear how the arcuate structural members are of box-section configuration. Is that all the arcuate structural members together formed of a box-section configuration? If so, there are not illustrated in drawing.

b) What does the term "their" refer to?

c) What does the term "load" refer to?

d) How does "load" can transfer from an outer arcuate structural member to an inner arcuate structural member?

Claims 2-5 are rejected since they are dependent on indefinite claim 1.

Regarding claim 6, lines 1-3, the recitation "wherein the upper and lower channel members have a transverse rib formed within the channel across the channel base between the channel flanges, the rib being formed from the base" is unclear. It is not clear for the reasons set forth below:

a) What "the channel" refers to. Does it refer to the "upper channel member" or the "lower channel member"?

Art Unit: 2821

b) There is insufficient antecedent basis for the limitation “the channel base” in the claim.

c) There is insufficient antecedent basis for the limitation “the channel flanges” in the claim.

Regarding claim 7, lines 1-4, the recitation “wherein the rib is formed by folding the fold being deeper at one flange than the other such that the rib is correspondingly deeper at one flange than the other, whereby the rib constitutes a cantilever and whereby the edges of the substantially rectangular sheet becomes angled about the rib to thereby form the arc in the arcuate member” is unclear. It is not clear for the reasons set forth below:

a) There is insufficient antecedent basis for the limitation “the fold” in the claim.

b) What does “the other” refer to?

c) There is insufficient antecedent basis for the limitation “the arc” in the claim.

Regarding claim 8, lines 1-7, the recitation “wherein the flanges of the upper and lower channel members have outwardly and inwardly directed returns at the respective toes thereof, such that when the upper and lower channel members cooperate to constitute the arcuate structural member of box--section configuration, the returns constitute cooperating keys and recesses respectively of adjoining concentric arcuate structural members whereby load can be transferred from an outer arcuate structural

Art Unit: 2821

member to an 40 adjoining inner arcuate structural member” is unclear. It is not clear for the reason set forth below:

- a) There is insufficient antecedent basis for the limitation “the flanges” in the claim.
- b) There is insufficient antecedent basis for the limitation “the respective toes” in the claim.
- c) The "load" in line 6 of claim 8 is the same or different with the "load" in 4 of claim 1. If they are the same, it should be changed to "said load".
- d) It is not clear what the phrase “an 40 adjoining inner arcuate structural member” refers to.

Regarding claim 9, line 2, there is insufficient antecedent basis for the limitation “the flanges” in the claim.

Claims 10-11 are rejected since they are dependent on indefinite claim 3.

Clarifications are required.

### ***Claim Rejections - 35 USC § 102***

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claims 1-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Schumacher et al. (US 5,104,211), hereinafter “Schumacher”.



Regarding claim 1, as best understood, Schumacher discloses, in Figures 1-5 and 9A-9B, a dish assembly including a central hub (21), an outer rim member (25), and a plurality of concentric arcuate structure members (13) extending from the central hub (21) to the outer rim member (25); the arcuate structural members (22) being of box section configuration and abutting along their inner and outer arcuate surface such that load can be transferred from outer arcuate structural member to an inner arcuate structural member.

Regarding claim 2, as applied to claim 1, Schumacher discloses, in Figures 1-5 and 9A-9B, wherein a plurality of radial support arms (23) extending from the central hub to (21) the outer rim member (25) and adapted to support the ends of the arcuate structural members.

Regarding claim 3, as applied to claim 1, Schumacher discloses, in Figures 1-5 and 9A-9B, wherein the arcuate structural members have an upper and lower channel members (41, 43) which cooperate to constitute the box section configuration.

Regarding claim 4, as applied to claim 3, Schumacher discloses, in Figures 1-5 and 9A-9B, wherein the upper and lower channel members (41, 43) are formed from substantially rectangular metal sheeting.

Regarding claim 5, as applied to claim 4, Schumacher discloses, in Figures 1-5 and 9A-9B, wherein the gauge of the metal sheeting from which the arcuate structural members are made is greater in an inner arcuate structural member than in an outer arcuate structural member.

Regarding claim 6, as best understood, as applied to claim 5, Schumacher discloses, in Figures 1-5 and 9A-9B, wherein the upper and lower channel members have a transverse rib formed within the channel across the channel base between the channel flanges, the rib being formed from the base.

Regarding claim 7, as applied to claim 6, Schumacher discloses, in Figure 9A, wherein the rib is formed by folding inwardly a portion of the base, the fold being deeper at one flange than the other such that the rib is correspondingly deeper at one flange than the other, whereby the rib constitutes a cantilever and whereby the edges of the substantially rectangular sheet becomes angled about the rib to thereby form the arc in the arcuate member.

Regarding claim 8, as applied to claim 3, Schumacher discloses, in Figures 1-5 and 9, wherein the flanges of the upper and lower channel members have outwardly and inwardly directed returns at the respective toes thereof, such that when the upper and lower channel members cooperate to constitute the arcuate structural member of box--section configuration, the returns constitute cooperating keys and recesses respectively of adjoining concentric arcuate structural members whereby load can be transferred from an outer arcuate structural member to an 40 adjoining inner arcuate structural member.

Regarding claim 9, as applied to claim 3, Schumacher discloses, in Figures 1-5 and 9, a plurality of mirrors affixed to the bases of the upper channel members whereby the dish assembly constitutes a solar collector.

Art Unit: 2821

Regarding claim 10, as applied to claim 9, Schumacher discloses, in Figures 1-5 and 9, wherein the mirrors are substantially square with sides substantially the width of the arcuate structural members.

Regarding claim 11, as applied to claim 1, Schumacher discloses, in Figures 9-13, including a dish support member supportable on a foundation and receivable within an opening in the hub member and adapted to cooperate therewith to elevate the dish assembly with respect to the foundation.

### ***Inquiry***

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DIEU HIEN T. DUONG whose telephone number is (571)272-8980. The examiner can normally be reached on Monday - Friday, from 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas W. Owens can be reached on 571-272-1662. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2821

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

09/30/08

DD

AU 2821

/Trinh Vo Dinh/

Primary Examiner, Art Unit 2821